

# **SERVICE MANUAL**

**COOKERS** 

		Ovens Compact Range Steam
© Electrolux Distriparts Muggenhofer Straße 135 D-90429 Nürnberg Germany	PublNr.: <b>599 522 770</b> 685 EN	Steam
Fax +49 (0)911 323 1022		
DGS-TDS-N Edition: 03.08		

### **Table of contents**

1.	ESD=electrostatic discharge	3
2.	Software specifications, functions	4
2.1	Panel example (Electrolux CH)	4
2.2	Possible touch controls of all groups of appliances	4
2.3	Symbol, explanation for display and keys	5
2.3.1	Display	5
2.3.2	Function touch keys	6
2.4	Main features of operation	6
2.4.1	Set clock	6
3.	Functions of appliance	7
3.1	Function of oven/consumers/performance	7
3.4	Oven function low-temperature cooking - more detailed explanation	10
4.	Data of components / assembly situation / disassembly	11
4.1	Opening the appliance	11
4.2	View of open appliance	13
4.2.1	Top view	13
4.2.2	Rear view	
4.3	Disassembly of Kronos 2 input electronic	14
4.4	Disassembly of SOEC power board	15
4.5	Disassembly of baking tray guides	
4.6	Disassembly of annular heating element	16
4.7	Thermal trigger Devaporizing	
4.8	Thermal trigger cooking steams	
4.9	Door switch	
4.10	Buzzer	
4.11	The steam generator	20
5.	Technical equipment	
5.1	Fan after-running	
5.2	Measure against wrong electrical connection	
5.3	Safety cutoff of oven	
5.4	Thermal safety	21
6.	Fault diagnosis/ What to do if?	
6.1	Alarm management (error codes)	
6.2	Fault codes	
6.3	Demo mode ON/OFF	
6.4	Measuring the temperature sensor	24
7.	Wiring diagrams / measuring points	
7 1	Block diagram	25

## 1. ESD=electrostatic discharge

As the single electronic interfaces are not protected internally against statical electricity and are partially open, you must pay attention to that, in case of a repair, there will be a potential compensation via the housing of the appliance (touch it) in order to neutralize a possible charging and to prevent a damaging of the affected electronic interface.

You also have to be careful with those electronics delivered as spare parts, which have to be put out of the ESD protective package only after a potential compensation (discharge of possible statical electricity).

If a potential compensation with an existing static electricity is not executed, it does not mean that the electronic is demaged directly. Consequential damages may result due to the damaging of internal structures which arise only in case of load through temperature and current.

Endangered are all assembly groups which are provided with control entries, wire paths lying open and free-accessible processors.

## 2. Software specifications, functions

### 2.1 Panel example (Electrolux CH)

### 2.2 Possible touch controls of all groups of appliances

AEG - D

EIN AUS PROGR. SCHNELL HEIZEN HEIZEN + ZEIT STELLEN

AEG - Intern.



Electrolux - Intern.

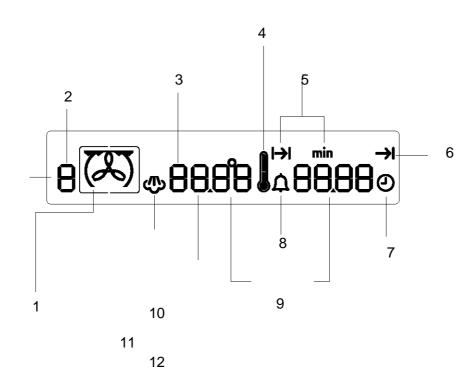
**AEG-CH** 

Juno-Electrolux

Ein Backofen- Pro- Memory Schnell Zeit Aus funktionen gramme Memory helzen Automatik

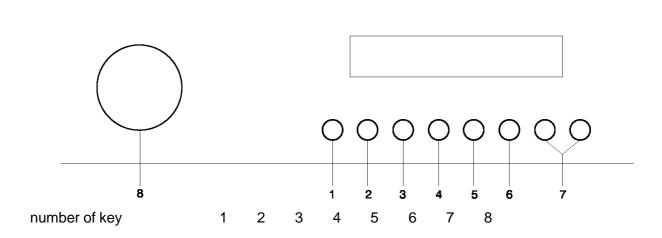
# 2.3 Symbol, explanation for display and keys

## 2.3.1 Display



symbol/indication no. meaning/explanation

1	display oven functions
2	display baking/broiling programs
3	memory function
4	thermometer symbol
5	duration
6	end
7	Time of day
8	short time
9	display time of day
10	temperature display
11	Steam operation display
12	d = Demo function



	AEG	AEG CH	Electrolux	Electrolux EU/JUNO
1	ON/OFF			
2	to the bottom		function of oven	
3	to the top		baking/broiling programs	
4	baking/broiling programs		memory function	
5	High-speed heating	memory function	Licht	High-speed heating
6	Minus		clock functions	
7	Plus	Plus	Minus	Minus
	clock functions	clock functions	Plus	Plus
8	Water drawer			

### 2.4 Main features of operation

### 2.4.1 Set clock

Information: The oven functions only with a set time.

When the appliance must be connected again with the mains e.g. after a repair, you have to set the clock anew. Proceed as follows.

After the connection or a short circuit the symbol for "time of day" is flashing. Use keys "+" or "-" to set the current time of day.

Wait 5 seconds

The flashing goes out and the clock shows the set time of day. The appliance is ready for operation.

- 6 -

Note: For detailed information on the operation/oven functions see

**Service Manual 599 354 040** 

# 3.

# Functions of appliance Function of oven/consumers/performance 3.1

		capacity [W]	Hot air	Turbo grill	Steam cooking	Low-temperature cooking
	suggested temperature		Elux CH 170°C Others 150°C	180°C	J.96	120 / 80°C
	Мах.		230°C	230°C	2°9€	
	Min.		30°C	30°C	50°C	
	Grill heater element	1500		×		
	hot-air blower	26			X	
	rear wall heater	1650	×			×
Jones	Steam generator	1800			X	
	Actuator Devaporizing	1			X	
	Actuator cooking steams ventilator	1	×	×		×
	cooling fan	36	×	×	×	×
	oven lamp	25	×	×	X	×
Sensors / door switch Oven sensor	oven sensor		×	×	X	×
	door switch		×	×	×	×
		capacity [W	Interval cooking	Surface grill	Kiln-dry/defrost	
	suggested temperature		180°C	230°C	30°C	
	Мах.		230°C	230°C	100°C	
	Min.		30°C	30°C	30°C	
	Grill heater element	1500		×		
	hot-air blower	26	×			
	rear wall heater	1650	×		×	
Consumer	Steam generator	1800	×			
	Actuator Devaporizing	1	×			
	Actuator cooking steams ventilator	1	×		×	
	cooling fan	36	×	×	×	
	oven lamp	25	×	×	×	
Sepsors / door switch	oven sensor		×	×	×	
	door switch		×	×	×	

	Steam wet			
Elements temperature controlled:	steam element			
Elements switched on:	cooking fan			
	cooling fan			
	light			
	actuator exhauste			
	actuator desteam			
emperature: steam element controlled with 2. temp. sensor (offset -23°C)				
	default	96°C		
	changeable	50° - 96°C (50-95 step 5 and 96	°C)	
	indication	yes		
		-		
	temperature	set temp. = sensor + offset	BK02	
Time:	default	30 min.		
Time.	changeable	between 6 min. and dur_max		
	indication	yes	DUR (Process time)	
	indication	J   C   C   C   C   C   C   C   C   C	Dort (i recess time)	5 Min.
Specials:	exhaust activated	DUR minus 5 min.		
•				
	desteam activated	l last 5 min. (without exhaust)		
		,		
		2		
	Cooling fan speed	1		
	steam element off	last 5 min.		

	Ste	am hot											
			_	-	Н				$\perp$	$\perp$	4		
Elements temperatur	o controlled:	steam element	+	+	$\vdash$				+	+	+	+	-
Elements temperatur	e controlled.	ring element	+	+	$\vdash$	++	++	++	+	+	-	+	+
		ring element	+	+	$\vdash$				+	+	-	-	
			+	+	$\vdash$	++	++	++	+	++	+	+	+
Elements switched on:	cooking fan		+	$\vdash$	$\vdash$	++	++	++	+	++	+		+
	cooling fan		+							$\dashv \dashv$			$\rightarrow$
	light		+						+	$\dashv \dashv$			+
	actuator exhauste		+							$\dashv \dashv$			
	actuator desteam		$\top$	$\perp$					$\top$	++			
			$\top$	$\perp$	7	oven <	110 °C	;	$\top$	++	To	ven :	> 110
			$\top$	$\top$						$\neg \neg$			$\top$
Temperature:	steam element:	power controlled 25% timecycle (non ring)	Т		П				$\top$	$\dashv \dashv$			$\top$
	BK02	temperature controlled with 2. temp. sensor	Т	Т					7				丁
		max. temperature 96°C (+ offset = 78°C)							$\top$	$\dashv \dashv$			
		offset -18°C											
	ring element:	power controlled 75% timecycle (non steam)	$\top$			7 1							
	BS01	temperature controlled with oven temp. Sensor	r		П	П	$\top$				Т		Т
			Т	Т									
	temperature	set temp. = sensor + offset											
	default	180°C											
	changeable	50° - max.	_			$\perp$	$\perp$		$\perp$	$\perp$			
	indication	yes	_		$\perp$					$\perp$		$\perp$	
			_	1		DUR	(Proc	ess tim	ne)				
			_							2 M	in.	10 N	1in.
Specials:	exhaust activated	DUK minus 2 min.										Ш	_
			_			$\perp$	$\perp$	$\perp$	$\perp$	$\perp$		$\perp$	
	desteam activated	last 2 min. (without exhaust)	_						$\perp$		L		$\bot$
			$\perp$	$\perp$	Ш		$\perp$	$\perp$	$\perp$			Ш	
			2_										$\perp$
	Cooling fan speed		1										

### 3.4 Oven function low-temperature cooking - more detailed explanation

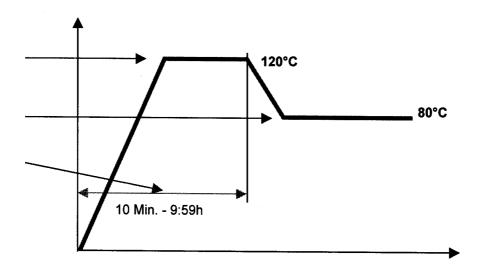


Diagram low-temperature cooking

- a) During the first 10 minutes of the program run the oven is heated up to 120°C. Both the temperature value (100°C-230°C) and the heating period (10 min-9:59h) can be set by the user
- b) The three segments of the thermometer symbol are flashing one after the other. After the heat-up time has passed, a signal will sound.
- c) The oven changes automatically to a firmly set temperature of 80°C. The oven temperature falls slowly to this value. This continues to be during the whole cooking time. The indication "duration" indicates the running broiling time.

- 10 -

## 4. Data of components / assembly situation / disassembly

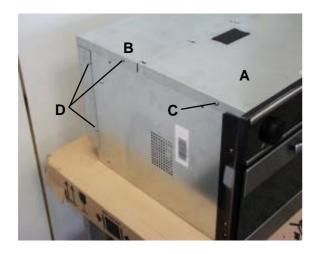
On principle the oven must be removed completely from the installation niche in case of service.

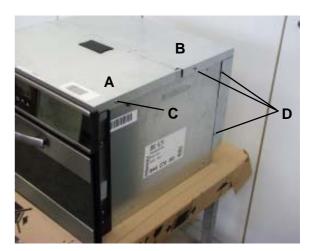
Note: 90% of all screws used in the appliance are Torx screws of size T20

### 4.1 Opening the appliance

The housing lid is made of a front and a rear half. For opening the front half of the lid you first have to remove both screws (C) right and left.

Six other fastening screws (D), three on the left and three on the right, must be removed to removed the rear half of the cover, which also functions as the rear panel at the same time.











If you remove front half of cover, most of the components important for the functions are accessible, and you can proceed to service them, depending on the error symptoms.

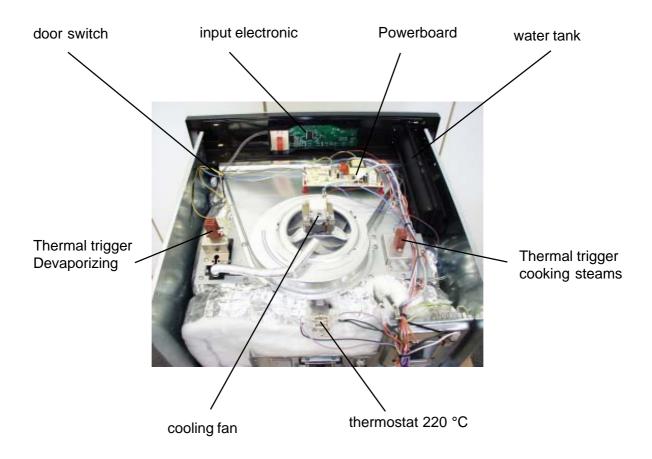


Fig.: Completely opened appliance

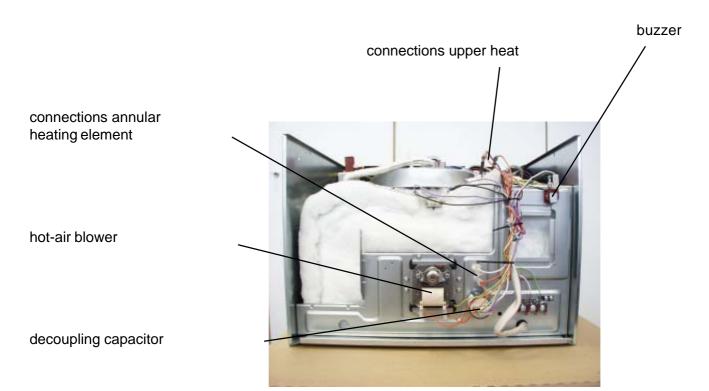
- 12 -

## 4.2 View of open appliance

### 4.2.1 Top view



### 4.2.2 Rear view



#### Disassembly of Kronos 2 input electronic 4.3





You will find the water drawer or water tank at the L.H. side of the control panel. To remove the water drawer handle, turn it by 45° counterclockwise to loosen the bayonet lock.





Input electronic in installed condition and disassembling after unlocking Fig.:

The input electronic is fixed by several locking hooks in the panel support. These must be unlocked before it is possible to remove the input electronic to the front side of the appliance.

## 4.4 Disassembly of SOEC power board



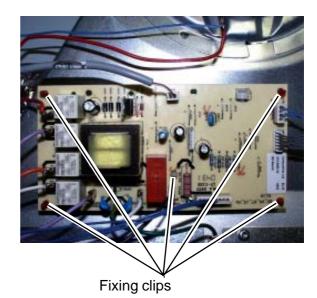


Fig.: Assembly position SOEC power board

It is positioned by five fixing clips. These must be released to remove the power board.

Note: For technical description of the SOEC power board see Service Manual 599 354 040

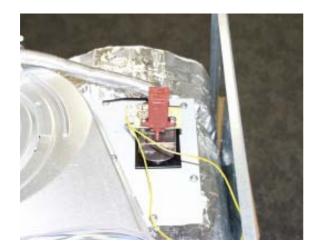
### 4.5 Disassembly of baking tray guides



### 4.6 Disassembly of annular heating element

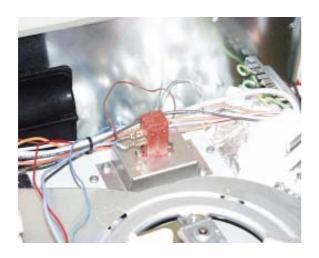


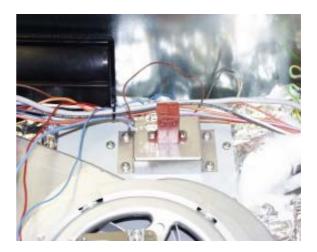
### 4.7 Thermal trigger Devaporizing





### Thermal trigger cooking steams 4.8

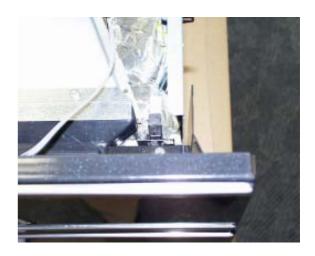






### 4.9 Door switch





Fitting position R.H. top accessible in the muffle frame

### 4.10 Buzzer





assembly situation: At left upper part of housing rear, at earthing support point

Fastening: Fastened with a Phillips screw

Technical Data: Voltage 230 V 50 Hz

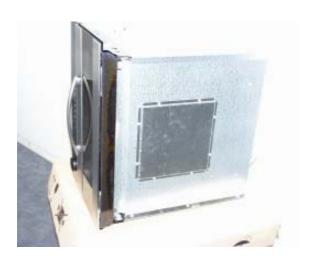
Sound pressure level 75 dB (A)

#### 4.11 The steam generator



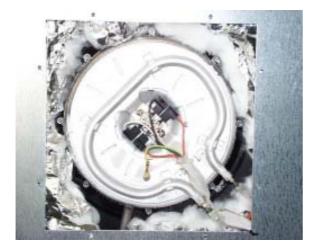


The steam generator is siutated in the centre of the oven floor.





To remove the steam generator, place the appliance to one lateral side. There is a cover on the housing floor, which is screwed in position with 8 screws. These screws must be loosened in order to access the steam generator and the two temperature sensors.



The complete "steam generator" unit is held by 8 hexagon nuts which you have to unscrew. Then take the component out towards the inside of the appliance.

#### 5. **Technical equipment**

#### 5.1 Fan after-running

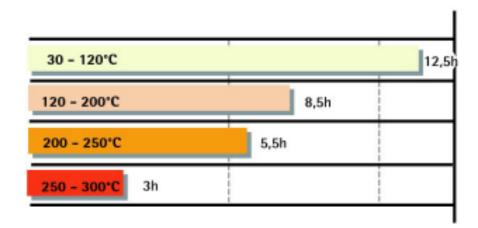
After switching off the appliance the cooling fan continues running until the centre of gravity temperature of the muffle has fallen below 140°C. In case of less than 140°C the cooling fan is running approx. 10 minutes. The residual heat will be indicated until the temperature has fallen down to 40°C.

#### 5.2 Measure against wrong electrical connection

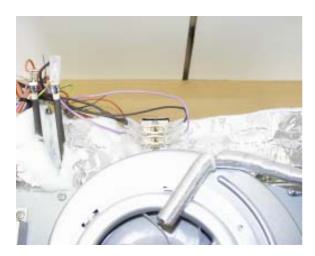
Not provided

#### 5.3 Safety cutoff of oven

When setting function and temperature without a time limit, the safety cutoff of the oven switches off automatically, depending on the set temperature.



#### 5.4 Thermal safety





In the middle of the appliance, in the back of the air channel, you find the double thermal safety device which switches the appliance off on all poles. The measured temperature value during a cutoff is 220°C.

# 6. Fault diagnosis/ What to do if ...?

## 6.1 Alarm management (error codes)

## Alarm management Powerboards Prisma OVC 1000 and OVC 2000

Display	Description	Measure
E 0101	Internal error Powerboard	Replace Powerboard
E 0202	Sensor Magnetron not okay	Check Magnetron sensor and replace if necessary
E 0404	Sensor stove not okay	Check stove sensor and replace if necessary
E 0808	Sensor stove not okay	Check stove sensor and replace if necessary
E 2020	Triac defect	Replace Powerboard
E 4040	Stove temperature > 290°C	Check Magnetron sensor and replace if necessary
E 0C0C	Sensor stove not okay	Check Magnetron sensor and replace if necessary
E 4444	Sensor stove not okay	Check Magnetron sensor and replace if necessary
E 4848	Sensor stove not okay	Check Magnetron sensor and replace if necessary
E 4C4C	Sensor stove not okay	Check Magnetron sensor and replace if necessary

### **Alarm management SOEC Powerboard**

Display	Description of Fault	Possible Fault
E 001	Too high temperature in the muffle in pyrolysis operation (door locked)	Relay stuck, fault in the control, sensor not measuring correctly
E 008	Short circuit at the sensor entrance	Sensor defective, wiring defective
E 020	Too high temperature at the muffle in normal operation (door not locked)	Pyrolysis type of operation: Fault during locking or locking feedback during pyrolysis Non-pyrolysis type of operation: Too high temperature at the muffle, relay stuck, fault in the control, sensor not measuring correctly
E 021	Initially too high temperature during pyrolysis (door locked) then door unlocked	Relay stuck, fault in the control, sensor not measuring correctly
E 025	Sensor not connected	Sensor defective, wiring defective, sensor circuit open
E 080	Heaters are switched on, but no rise in temperature takes place within approx. 7 min. Only active below approx. 70 °C	Heaters are not connected (slow-break switching), heater defective, sensor not at the muffle

### 6.2 Fault codes

Display	Fault	Cause/measure
E0020	oven lamp defect	Replace oven lamp
E0101	Internal electronic problem	Execute mains reset.
		Disconnect the appliance
		from the mains and put it into
		operation anew. If necessary, substitute electronic.
E0404		
E0808		
E0C0C		
E4444		
E4848		
E4C4C	No detection temperature	check sensor and lines
	sensor.	If necessary, replace them.
	Without contact or short	
	circuit.	
E2020	Power board problem	Execute mains reset.
		Disconnect the appliance
		from the mains and put it into
		operation anew. If necessary,
		substitute powerboard.
E4040	Over-temperature	Replace stuck relay contacts
		of radiators power board

## 6.3 Demo mode ON/OFF

Key combination: Actuate "program" and "+" simultaneously 2 sec.

### 6.4 Measuring the temperature sensor

If a failure at the temperature sensor is assumed, the resistance can be checked by means of an ohmmeter.

The resistance of the temperature sensor should be 500-600 ohms at room temperature. Make sure to measure the insulation resistance between the metallic housing and each connection terminal.

The resistance should be higher than 2 MOhms.

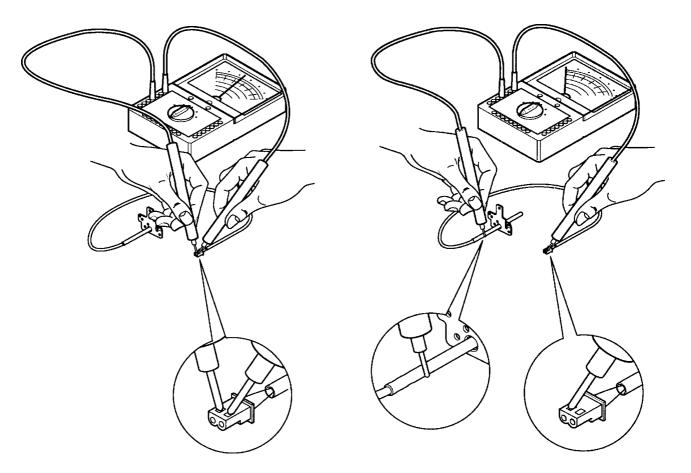


Abb. Measuring the temperature sensor

### 7. Wiring diagrams / measuring points

### **Block diagram** 7.1

### legend

f1 thermostat oven PT500

f2 safety thermostat baking oven

h4.1 oven lamp

m1 fan hot-air blower =

cooling fan broiling oven m2

door switch ---> switch position when door is closed Q3

grill broiling oven r14

annular heating element r16

